

maximus was allied to the *Dinornis* and the *Apteryx*, "although it is distinguished from them by profound differences of internal organization, amongst others by the presence of highly developed air-passages, which allowed the air to penetrate into the thigh-bones."

M. Grandidier also discovered the bones of two other and smaller species of *Æpyornis*, one of the height of a Cassowary, and the other as large as a Bustard, so that it is probable that there were several species of this ancient genus formerly living in Madagascar. Most of the eggs of the largest species have been found in a small district in the extreme south-east corner of the island, between the River Mandrèry and a promontory called Andrahòmby. In this neighbourhood fragments of the eggs are said to be easily obtained, but perfect eggs are very rare and command a large price in Europe. Another specimen, described by Mr. G. Rowley, was found at Mānanjàra, on the south-east coast, at a depth of 45 feet, in a hill of ferruginous clay, by some natives who were digging for iron-ore. As these remains have thus been discovered at three different points on the southern coast of Madagascar, there can be little doubt that systematic exploration would reveal much more numerous relics of this big bird as well as of its eggs.

It is not at present possible to say exactly at what period these great Malagasy birds became extinct, but M. Grandidier believes that they were existing at a very recent epoch, since their remains are found in the newest formations, and that therefore they have been living during the period since man has inhabited Madagascar.

— XXI.—*Notes on the Caprimulgidæ.* By ERNST HARTERT.

(Plate VI.)

ALTHOUGH the Cypselidæ and Caprimulgidæ are, in my opinion, somewhat allied families, and, in a systematic arrangement, should be placed near together, there can hardly be found a greater difference than in the dull and

simple coloration of the plumage of the Swifts, mostly very constant and liable to little variation, and the beautiful and richly coloured plumage of the Goatsuckers, varying in most of the species to a certain extent, and, in some cases, more than in almost any other family of birds. The colours of the Caprimulgidæ are, as a rule, highly protective, and, as in other similar cases (for instance, *Alauda*, *Galerita*, &c.), vary much according to the surroundings, and especially in relation to the soil. So, as a rule, we find yellow, buff, and isabelline-coloured species in sandy deserts and desert-like localities, darker species in more wooded countries, and richly coloured ones in tropical forests. But even the same species varies much, according to the soil that it frequents, and therefore several species readily form more or less well-defined local races, often well worthy of subspecific rank. In many cases, of course, as usual, we do not understand the reasons why a certain form is differentiated, because we have so little knowledge of the influence of climate, the amount of rainfall, the surroundings, and the food. Still more puzzling are several other forms, because they undoubtedly occur in reddish and brownish or greyish phases, apparently independent of locality and age, as is the case with certain Owls, also birds of nocturnal habits.

Before an author writes about any group of birds he should make himself acquainted with their seasonal changes of plumage; and this I have tried to do as regards the Goatsuckers, but have unexpectedly found it very difficult. C. L. Brehm and also Naumann, whose statements generally stand like stone and iron, both assert that the Common Goatsucker moults twice in the year—the first time before it leaves Europe, and the second in its winter-quarters. All subsequent writers that touch upon the question at all also state that a double moult takes place. Until lately I had no reason to doubt this assertion, as the specimens of *Caprimulgus* that I have shot in Germany during the migration in autumn were, so far as I can remember, all without white tips to the lateral rectrices—a character which, according to the authors named above, is that of young specimens as well

as that of the adult bird after the summer moult. During my recent investigations, however, I have come to consider it very improbable that there really exists an entire summer moult in the Caprimulgidæ, as several specimens which I have examined seem to disprove its existence. Correspondence with several good field-ornithologists in my own country and personal inquiries among a number of my English friends have not satisfied me; at least nobody could state that he had undoubtedly observed a *total* moult. For the present, therefore, I must leave this question open, but I hope to be able to solve it during the current year. What I now believe is, that the Goatsuckers moult very slowly, like all birds which depend greatly on their powers of flight in procuring food; that there is no time to moult the wing- and tail-feathers between the breeding-season and their departure; that they do not moult them during their voyage to the south, and that therefore (though they may change parts of the body-plumage in Europe) they moult the quills and rectrices during their absence from Europe—so that *only one moult takes place in a year*. I should be extremely delighted if ornithologists could give me some evidence of the truth of this supposition or disprove it.

In working at the Caprimulgidæ in the British Museum I have had before me grand materials, as will be seen from the lists of specimens in the 'Catalogue of Birds'; but, besides these, I have tried to see as many specimens as possible of rare species and of such forms as are not represented in the British Museum, especially types and typical specimens. Herein I have been greatly assisted by Mr. F. A. Allen, Freiherr H. von Berlepsch, Messrs. J. Büttikofer, H. Dresser, R. Hertwig, Alfred Newton, Th. Pleske, O. Salvin, J. Stolzmann, Count Salvadori, Mr. Walter Rothschild, Mr. H. Seeböhm, Canon Tristram, and others, who have rendered me most valuable help.

Having said thus much, I will proceed to give remarks upon certain obscure points as regards some of the species of this difficult group.

(1) *CAPRIMULGUS EUROPEUS* and its allies.

The Common Goatsucker is spread over Europe generally and the south-western parts of Siberia. There is no difference in plumage between specimens from various parts of Europe, except in the extreme east, where the plumage becomes paler and the dark markings less bold. If we proceed further to the east, to Eastern Persia, the Oxus, Afghanistan, and North-western India, we find this form more developed and more pronounced, so that specimens from these localities form a subspecies, *Caprimulgus unwini* of Hume. This form seems to be very distinct, if it is compared with specimens of *C. europæus* from Western Europe, but it is connected with the latter by a perfect series of intermediate forms. Therefore it is only possible to regard *C. unwini* as a paler and smaller subspecies of *C. europæus*, but it is not desirable to name any of the intermediate forms also, as there is no constancy among them. No advantage can be gained by naming such ill-defined intermediate forms as are connected with both extremes by an unbroken series.

The *Caprimulgus europæus unwini*, as I shall call this eastern form, is found in Eastern Persia, Afghanistan, the Northern Panjab, parts of Turkestan, and far into the East. It wanders south in winter to Sindh, and probably to Arabia.

Besides this well-known race there is another almost unknown form in Central Asia, *i. e.* the *Caprimulgus plumipes* of Przevalski (Rowl. Orn. Misc. ii. p. 158). Through the kindness of Dr. Pleske, I have had the opportunity of examining one of Przevalski's typical specimens of this bird from Mongolia and two perfectly similar specimens from Turkestan. It is a very distinct form, of a rufous-buff, or even sandy-rufous, colour, with narrow streaks of black along the crown, and with broad and regular pale rufous bands across the inner webs of the primaries. Comparison of a large material, however, shows that these characters are less constant than the first impression induces one to think. There are specimens of *C. unwini* that approach *C. plumipes*, and some of the latter that somewhat point to *C. europæus*. Therefore it seems preferable to consider *C. plumipes* as

another subspecies of *C. europæus*, but by no means intermediate between the latter and *C. unwini*. Besides the specimens of *C. plumipes* from Mongolia and Tschinas in Turkestan, from the St. Petersburg Museum, I have before me one from Kandahar, in Afghanistan, and one from the Dolan district, about thirty miles from Yarkand, collected by Dr. Scully. The latter specimen, which is as unmistakable as that from Kandahar, is mentioned in 'Stray Feathers' (iv. p. 133) under the name of *Caprimulgus ægyptius*; but a footnote by the editor clearly indicates that he was very uncertain about this identification, and there is no doubt that the mistake only happened from want of specimens of the true *C. ægyptius*. Although in the coloration of the upper surface *C. plumipes* has a faint resemblance to *C. ægyptius*, it can never be mistaken for that bird, the white (not pale rufous) bands or sinuations on the inner webs of the primaries and the quite different dark markings of the upper surface being sufficient to distinguish the latter.

But other Goatsuckers are found in Turkestan. The true *Caprimulgus ægyptius* occurs in the sandy plains of the north-western districts, as *C. arenicolor* of Severtzoff (types examined) is exactly similar to African specimens of this species.

The pale *C. europæus unwini*, as before mentioned, is not rare in several parts of Turkestan. The *C. e. pallidus*, Severtz., is the same as *C. e. unwini*, but among Severtzoff's specimens is at least one that is intermediate between *C. e. unwini* and *C. e. plumipes*.

But these are not the only *Caprimulgidæ* which inhabit Turkestan, as I have before me two specimens from the St. Petersburg Museum that are undistinguishable from dark western specimens of *C. europæus*! I have, however, reason to believe that this latter is not resident in Turkestan, but only occurs there as a wanderer, perhaps from S.W. Siberia. In Siberia probably both *C. europæus* and *C. e. unwini* are found breeding, although, of course, not in the same localities, the former being most likely met with more to the north and in the forests. *C. e. unwini* seems to grade into

C. e. plumipes, as a specimen from Chami in Mr. Seebohm's collection somewhat points to the latter. More material is wanted in order to determine the areas of the several forms of *Caprimulgus* in Central and Northern Asia.

(2) *CAPRIMULGUS LENTIGINOSUS*, Smith.

When I wrote the 'Catalogue of the Birds in the Senckenberg Museum at Frankfort,' I believed *Caprimulgus tristigma*, Rüpp., to be a distinct species, and expressed my opinion to that effect in a footnote on page 120. But I had no specimen of the South-African *C. lentiginosus* to compare with it at the time, and judged only from the descriptions of the latter. After comparing Rüppell's type with the specimens of *C. lentiginosus* from South Africa in the British Museum, there can be no doubt that they are identical. The wings of the specimens in the British Museum vary from 7·2 to 7·6 inches, that of the type of Rüppell's *C. tristigma* measures 7·5 inches. The white spots on the primaries vary in size, and sometimes disappear on the third primary. Some specimens have large white spots on the outer rectrices, others are without them, the latter probably being the females.

(3) *CAPRIMULGUS EXIMIUS*. (Plate VI.)

Plate VI. represents one of the most beautiful species of the genus *Caprimulgus*, the rare and very little known *C. eximius*. The figure is taken from a typical specimen in the Frankfort Museum. Three specimens were brought home by the earliest ornithological explorer of Abyssinia, Rüppell. The species has been described and very badly figured in Temminck's 'Planches Coloriées.' There, and in Rüppell's 'Systematische Uebersicht,' *Sennaar* is given as its habitat. Absolutely nothing is known about the exact locality and the habits of this species. Herr Erekel, Rüppell's collector during his second voyage, has kindly informed me that the specimens were killed in 1823 or 1824 by Hey, Rüppell's collector during his first voyage, probably near the Bahr el Abiad, in Upper Nubia. There can be no doubt that this is a bird which inhabits desert or desert-like countries, for its colour is a beautiful adaptation to the yellow sands of the desert.

The species has never been procured since. Two specimens are at the Frankfort Museum and one at Leyden.

(4) CAPRIMULGUS ASIATICUS, Lath.

There is a very large series of this species in the British Museum: I have seen many more, and I brought several with me from India. Very exact descriptions of it are given in Legge's 'Birds of Ceylon.' This author states that the female has the spots on the 2nd, 3rd, and 4th quills buff, *in some examples wanting altogether*. Unless a great many specimens collected by the most reliable collectors are wrongly sexed, which cannot be supposed, this statement is not quite correct. I cannot distinguish the sexes in quite adult examples, and I have never seen a specimen without any spots on the quills. The white terminal patches to the outer tail-feathers vary in extent and are often not pure white; but this does not seem to be a sign of immaturity, nor is it peculiar to the male; to judge from the material that I have been able to examine, it is merely individual variation. Specimens from drier and more sandy districts are much paler and more isabelline than those from wooded countries; but it is not possible to separate these local forms. Oates (B. Burm. ii. p. 18) has suggested that *C. tamaricis* might be identical with *C. asiaticus*; but this is not the case. *C. tamaricis* of Tristram is identical with *C. nubicus*, Licht., and *C. infuscatus* of Rüppell, as has been already stated by Blanford in the 'Geology and Zoology of Abyssinia,' p. 336. This I have been able to verify by examining the types of these authors.

(5) CAPRIMULGUS AFFINIS, Horsf.

It has been admitted (*cf.* Salvadori, Ucc. Borneo, p. 116) that *C. affinis* occurs in Java, Sumatra, Borneo, Timor, and Lombock. A careful comparison of specimens from all the above-named localities has convinced me that they really belong to one species. But considerable doubts have existed as to whether *C. arundinaceus*, Jacq. & Pucher. (Voy. Pôle Sud, Ois. p. 93), the "Engoulevent des Roseaux" of Hombron and Jacquinot (figured pl. 21. fig. 2), is a distinct species. I

have not been able to examine the type in the Paris Museum, but the figure splendidly represents a female of *C. affinis*. It is true that the white patch on the throat seems to be extended too far in the middle, but this often occurs in skins if the feathers are a little displaced. It is also to be noted that Motley procured *C. affinis* at Baujermassing, the locality whence the type of *C. arundinaceus* came. Two very closely allied forms are seldom found in the same district.

Recently Dr. A. B. Meyer (Sitzungsber. u. Abhandl. Ges. Isis, 1884) has described as a new species *C. faberi* from West Sumatra. The author admits that his *C. faberi* closely resembles the figure of *C. arundinaceus*, but proceeds to point out some differences. These differences, however, cannot serve to distinguish the Sumatran form specifically. First, regarding the habitat: this has little value, since I find that a specimen from Sumatra is undistinguishable from *C. affinis* from other localities. The darker coloration of the upper surface in the supposed new species (*C. faberi*) is of no consequence, since rather dark and rather pale specimens occur in the same localities, as the series in the British Museum and several other specimens which I have seen clearly show. The lower abdomen and under tail-coverts in *C. affinis* are always uniform, the bands on the inner webs of the outer tail-feathers being occasionally absent on the inner margin in females from several localities (Lombok, Celebes). The minute and careful description of *C. faberi* clearly indicates that it is a female. The greatest value seems to be attached to the presence of wing-patches. I must, however, remark that several females before me have no spot on the outer web of the second primary, while others from the same locality have it well developed. Therefore there is no doubt in my mind that *C. arundinaceus* and *C. faberi* both belong to *C. affinis*.

(6) *CAPRIMULGUS ALBONOTATUS* and *C. MACRURUS*.

The close resemblance of *C. macrurus* to *C. albonotatus* has already been mentioned by A. O. Hume and E. W. Oates (B. Burmah, ii. p. 20). The latter has made the following

remarks :—"The 'Large Bengal Nightjar' is very similar to the 'Malay Nightjar,' and is liable to be confounded with it. The two species, in fact, grade into each other with respect to size, and had I more birds available for examination I should probably be led to unite them." If one compares a real *C. macrurus* from Malacca, Sumatra, or Java with specimens of *C. albonotatus* from N.W. India, he is easily convinced that they are two totally different species. But comparing a series of several dozens of each from the above-named localities he will make the remark that they vary much in colour ; and on comparing a good series of birds from Tenasserim, Burmah, and Assam he will see that in the latter localities many intermediate phases occur, so that *it is impossible to draw an exact line between the two forms*. Still the extremes are very different, and therefore I am not prepared to follow one of the two ways which are the only possible ones, as Mr. Hume thinks ('Stray Feathers,' 1878, ii. p. 257, note), and which also Mr. Oates seems to regard as the only possible ones, *i. e.* either to unite them under one name or to keep them up as two different species, but I shall treat them as subspecifically distinct. If I were to unite them under one specific name, no doubt many subsequent writers would correct me and point out the differences between the two forms ; and if I separated them specifically I should probably be corrected by those who have the opportunity of comparing very large series from different countries and seeing how they run into each other. In treating *C. albonotatus* as a subspecies of *C. macrurus*, I believe that I do full justice to the fact that there are two forms which, in a large area, where their habitats come together, form intermediate links, and cannot therefore be regarded as "good" species. Not only are the Australian specimens, as Oates justly mentions, very small, but all those from the islands (Java, New Britain, Aru Islands, &c.) are as small as those from Australia. I shall therefore call the southern form *C. macrurus*, Horsf., and the Indian race *C. macrurus albonotatus* (Tick.).

Specimens of *C. macrurus* from North Borneo are very

dark and small, and in the skins in the British Museum the narrow line running along the gape, which is more or less buffish in typical *C. macrurus*, is somewhat obvious and whitish. On account of these facts the bird inhabiting North Borneo was distinguished by Dr. Bowdler Sharpe under the name of *C. salvadorii*. Afterwards, when Mr. Everett had sent more specimens, Dr. Sharpe admitted the close resemblance of his *C. salvadorii* to *C. macrurus*, and now that more materials are available I believe that he does not insist on its specific distinctness. Comparing the series of specimens from North Borneo with the very large series of *C. macrurus* from other localities, I find it impossible to separate them. Specimens from Waigiu and Aru are perfectly similar to those from North Borneo; they belong to the very dark blackish island-form.

Again, specimens from the foot of the Himalayas, especially those from Nepal, differ from typical *C. albonotatus* from the plains in their brighter colours and more frequent dark markings, but are not so dark as *C. macrurus*. This may be due to the different and more covered soil rather than to the climate. They might, without much objection, be separated as a subspecies—*C. nipalensis*, Hodg. (nom. nud.), but nothing can be gained by distinguishing such slightly differentiated and restricted forms. Indeed, this form from the mountains may be regarded as intermediate between the true *C. albonotatus* and *C. macrurus*.

(7) CAPRIMULGUS INDICUS and C. JOTAKA.

Mr. Hume, in several places in 'Stray Feathers,' has pointed out that the so-called *C. indicus* and *C. jotaka* are closely allied, and that almost all the distinguishing characters fail if large series are compared. He has therefore admitted ('Stray Feathers,' 1878, i. pp. 56, 57) that he was unable to discover an absolute distinction between the two, and that they might be merely races of one species. In vol. xi. of 'Stray Feathers,' however, he says that he believes that their notes are different. Oates, in vol. ii. of the 'Birds of British Burmah,' p. 21, also gives evidence of the close

affinity of the supposed species, but states that the size is different, and that the white on the tail-feathers in the male is terminal in *C. indicus*, but subterminal in *C. jotaka*, and that the females can only be separated by size. The character of the white spots to the tail-feathers being terminal or subterminal fails entirely on examination of the series now in the British Museum. As regards size, it is quite obvious that specimens from Japan and the Himalayas are very much larger than those from South India and Ceylon, the latter also being less rufous and very greyish. From what I had seen before I never thought it probable that these forms would run into each other; but after studying the grand series now before me I must confess that intermediate stages are common in India, and that therefore the large bird and the small are merely forms of one widely spread species, the smaller one being worthy of subspecific rank.

As regards the name *C. indicus*, Lath., there is no doubt that in 'Jerd. Ill. Ind. Orn.' it is first used for one of these forms; but it is not possible to decide whether Latham's bird was the large form from the Himalayas or the smaller, because Lady Impey, from whom he got the bird, had many forms from the Himalayas (such as *Lophophorus impeyanus*, among others), while others were apparently from the plains. The next oldest name is *C. cinerascens* of Vieillot. Vieillot only gives India as the habitat, and his description is not sufficient to decide which form he meant, although he probably intended the smaller one. Hodgson's name, *C. saturator*, no doubt applies to the Nepal bird, but it is a *nomen nudum*. The first name published with description and plates of both sexes, and about which there can be no doubt whatever that it refers to the large form, is *C. jotaka*, Temm. et Schleg. (Faun. Jap., Aves, p. 37, pls. 41, 42), and the first name referring to the smaller form from Ceylon is *C. kelaarti*. I therefore think it most convenient, and also right, according to the rules of nomenclature, to adopt as the specific name of this bird *C. jotaka*, and to regard the South-Indian small and grey form as a subspecies of it, which I shall call *C. jotaka kelaarti*. The name *C. indicus* should be dropped

altogether; it possibly refers to some of the intermediate forms, but the description is so meagre that this is merely a probability. *C. jotaka* ranges from Eastern Siberia through Japan, China, Cochin China, Burmah, and along the Himalayas; it becomes smaller and paler in India, smallest in the south of the Indian peninsula and in Ceylon, where it becomes typical *C. kelaarti*. The forms between the large and dark *C. jotaka* and the small and pale *C. kelaarti* cannot be distinguished, there being no permanent form between them, but an unbroken series of connecting links. The extreme forms, however, are very different, and therefore must be subspecifically distinguished. Stragglers or regular migrants occur very far south in the Malayan and Papuan Islands. The specimen from Penang mentioned by Salvadori (Orn. Papuasias, i. p. 531), and noted on the label as being compared and found identical with the type of *C. melanopogon*, is a specimen of *C. jotaka* of the larger and darker form. It was probably a wanderer from Burmah. Therefore *C. melanopogon* is a synonym of *C. jotaka*.

(8) CAPRIMULGUS CONCRETUS.

Dr. Bowdler Sharpe (P. Z. S. 1875, pp. 100, 101) has already shown that *C. borneensis* is identical with *C. concretus*. Some specimens are without the large white spots on the outer rectrices, and as they are apparently adult individuals there is hardly any doubt that they are females, though, unfortunately, they are not sexed. In its coloration this Goatsucker very much resembles the smaller species of *Lyncornis*, and therefore G. R. Gray, in his 'Hand-list,' placed it in the genus *Lyncornis*; but a close examination shows that it is not a *Lyncornis*. In fact it is inseparable from *Caprimulgus*, though it must be admitted that the toes are rather short and powerful. This character does not seem to be sufficient to establish a new genus, but, at the same time, fresh specimens of this species require to be studied.

(9) Genus ANTROSTOMUS.

I have not been able to find a satisfactory generic distinc-

tion between the American species generally placed in the genus *Antrostomus* and the species of *Caprimulgus* from Europe, Asia, Africa, Australia, and Madagascar. This statement is not surprising, nor is it new, as several good ornithologists—Selater, Baird, Lawrence, and Ridgway, among others—have remarked the same before; but, in spite of their own acknowledgments, most of these authors have continued to use the name *Antrostomus*. There is, however, no reason to retain the name for a genus which has no value whatever.

Caprimulgus carolinensis, the type of the genus *Antrostomus*, has, singularly enough, lateral filaments to the rictal bristles, but in every other respect it is so entirely similar to *Caprimulgus rufus* and other forms that it would be absurd to separate it generically from them on account of these small filaments.

(10) *CAPRIMULGUS MACROMYSTAX*, Wagl.

When I began to work on the American Caprimulgidæ in the British Museum, Mr. Salvin called my special attention to *Caprimulgus macromystax*, poorly described in the 'Isis' from a tailless specimen in the Munich Museum. From various notes by Selater and Salvin, and from the descriptions in Baird, Brewer, and Ridgway's 'North-American Birds,' and Ridgway's 'Manual N. A. B.,' it appeared to me that the form called *Antrostomus macromystax* by the American authors was probably not the same as that so called by English ornithologists. Professor R. Hertwig has been kind enough to lend me the type of *C. macromystax*, and this has enabled me (although the specimen is in poor condition) to ascertain easily enough that the specimens in the British Museum are correctly named, and further that they are identical with *Antrostomus vociferus arizonæ* of Brewster. The latter is well described in the 'Auk,' and is a very recognizable subspecies, although connected with *Caprimulgus vociferus* by intermediate forms. It must be called *Caprimulgus vociferus macromystax* (Wagl.) if trinomials are used.

The *Antrostomus macromystax*, Baird, Ridgway, &c. (nec

Wagl., Sel., &c.), is quite different, and at once distinguished from *C. vociferus* and its forms by the shape of the silky white tips to the outer rectrices, which are similar to those in *Caprimulgus sericeocaudatus*, a very distinct form from South America. As it has no name I propose to call it *Caprimulgus salvini*.

(11) Genus HYDROPSALIS.

The group of Goatsuckers with elongated tail-feathers show great variety in the form of the rectrices, which is different in almost every species. Some species have the outer rectrices extremely elongated, others the central and lateral rectrices moderately elongated, others, again, the central rectrices moderately elongated and the lateral much elongated, while in the African *Scotornis* only the central rectrices are elongated. If the American species of this group are associated in one genus, there remains no reason whatever to distinguish the African *Scotornis* generically. But probably it would not meet with general agreement among the authorities on African ornithology if *Scotornis* were united with the American *Hydropsalis*. Therefore I believe it will be more convenient to divide these birds into three groups, which are easily recognizable as follows :—

I. Lateral rectrices extremely elongated, the rectrices becoming gradually shorter to the middle, the central ones shortest ; upper tail-coverts short. This is *Macropsalis*, and contains *M. lyra*, *M. forcipata*, and *M. segmentata*.

II. Lateral and central rectrices elongated ; lowest upper tail-coverts elongated. This is *Hydropsalis*, and contains *H. climacocercus*, *H. torquata*, *H. schomburgki*, and *H. furcifera*.

III. Central rectrices only elongated, rectrices becoming gradually shorter to the sides, lateral ones shortest ; central upper tail-coverts somewhat elongated. This is the African *Scotornis*.

(12) Genus SCOTORNIS.

The chief character given by Swainson (B. W. Afr. ii. p. 68) for his genus *Scotornis*, the variation in length of the

outer and inner toes, is absolutely worthless, as may be seen by comparing a *Scotornis* with a species of the genus *Caprimulgus*. But fortunately the shape of the tail in the type of *Scotornis* is so different, and so easy to describe and to recognize, that it may be wise to retain the genus *Scotornis*, for it is very convenient to isolate some of the numerous Goat-suckers which inhabit the Old World.

In my opinion there is only one species of *Scotornis*. The *Scotornis nigricans* of Salvadori is certainly very different in colour from the common phase of the West-African *Scotornis*, and at first sight seems to be founded on good grounds. But after a rather large number of specimens from different localities have been compared, it becomes obvious that *Scotornis* varies considerably in coloration, and that if *S. nigricans* is admitted there should, with almost equal right, be created a "*S. rufescens*" from the Niam-Niam country, a "*S. pallida*" from Khartoom, Accra, and other localities, and perhaps others. All the characters, such, for instance, as the differently barred tail of *S. nigricans* (which Dr. Finsch considers to be so important), will be found to have absolutely no value after a close comparison of a large series, and there remains nothing but the darker colour, which cannot be regarded as important in such variable birds. Should a certain country produce such dark forms only, then it would be probably an adaptation to the darker colour of the soil, and might be considered a subspecific form; but this does not seem to be the case. I therefore admit only one species of *Scotornis*.

XXII.—Remarks on *Lanius lahtora* and its Allies.

By H. E. DRESSER, F.L.S., F.Z.S.

IN collecting materials for my Appendix to the 'Birds of Europe,' I have lately been busily employed in a careful re-examination of examples of *Lanius lahtora* and its allies. It may be of interest to ornithologists if I report progress and give them the results of my investigation.

APRIL 1892

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